

What is claimed is:

1. A method of cell analysis comprising detecting presence of a mutant Plk protein in a cell, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.
2. The method according to claim 1 wherein the cell is a malignant cell.
3. The method according to claim 1 wherein the cell is a malignant tumor cell.
4. A method for diagnosing a malignant tumor which comprises detecting presence of a mutant Plk protein in a tumor sample, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.
5. A method of detecting presence in a cell of mutant Plk protein which promotes oncogenesis comprising analyzing a biological sample for presence of mutant Plk protein, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.
6. The method according to claim 5 wherein the cell is a malignant cell.
7. The method according to claim 5 wherein the cell is a malignant tumor cell.
8. A method of cell analysis comprising detecting presence of a mutant Plk nucleotide sequence encoding a mutant Plk protein in a cell, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.
9. The method according to claim 8 wherein the cell is a malignant cell.
10. The method according to claim 8 wherein the cell is a malignant tumor cell.
11. A method for diagnosing a malignant tumor which comprises detecting presence of the mutant Plk nucleotide sequence encoding a mutant Plk protein in a tumor sample, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.

12. A method of detecting presence in a cell of mutant Plk nucleotide sequence encoding a mutant Plk protein which promotes oncogenesis comprising analyzing a biological sample for presence of the mutant Plk nucleotide sequence, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.

13. The method according to claim 12 wherein the malignant cell is a malignant cell.

14. The method according to claim 12 wherein the malignant cell is a malignant tumor cell.